



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,694	01/30/2001	Masanori Mukai	1081.1106/JDH	8154

21171 7590 05/24/2004  
STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

PATEL, KANJIBHAI B

ART UNIT	PAPER NUMBER
----------	--------------

2625

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/771,694

Applicant(s)

MUKAI, MASANORI

Examiner

Kanji Patel

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. Figures 4 and 5A-5C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

**Claims 1-5** are rejected under 35 U.S.C. 102(a) as being anticipated by applicant's admitted prior art (pages 1-3 of the specification and Figures 4, 5A-5C).

**For claim 1**, the admitted prior art discloses a paper discriminator (figures 4- 5) for discriminating papers being conveyed along a conveyance path, the paper discriminator comprising:

a line sensor (figure 4; page 1, lines 16-26) arranged at a first position on the conveyance path, the line sensor acquiring first data on the entire surface of paper;

a point sensor (figure 4; page 1 line 16 to page 2 line 2) arranged at a second position on the conveyance path, the point sensor acquiring second data on a part of the paper;

a memory for (page 2, lines 9-24) storing the first data and the second data in correlation with a common coordinate plane;

a data processor (page 2, lines 9-24) for acquiring predetermined positional information of the first data on the coordinate plane and acquiring the position of the second data with respect to the position of the first data on the basis of the positional information;

a storage unit (page 2 line 9 to page 3 line 3) for storing first reference data of the entire surface of the paper corresponding to the first data and second reference data of the entire surface of the paper corresponding to the second data; and

a discriminator (page 2 line 9 to page 3 line 3) for comparing the first data with the first reference data and comparing the second data with a part corresponding to the position of the second data in the second reference data, and for discriminating the paper based on the results of the comparison.

**For claim 2**, the admitted prior art discloses the paper discriminator further comprising:

a driver for controlling an operation start time of the line sensor or the point sensor on the basis of the difference of distance between the first position and the second position in the conveyance direction so as to allow the first data and the second data to be correlated on the common coordinate plane (figure 4; page 1, line 16 to page 2 line 2).

**For claim 3**, the admitted prior discloses the paper discriminator, wherein the positional information includes an offset relative to the reference position on the coordinate plane and an inclination relative to the reference direction (figures 5A).

**For claim 4**, the admitted prior art discloses the paper discriminator, wherein the first reference data and the second reference data are data for the reference position and in the reference direction, and the data processor corrects the first data and the second data into data for the reference position and in the reference direction on the coordinate plane based on the offset and the inclination (figures 5A-5C).

**For claim 5**, the admitted prior art discloses the paper discriminator, wherein the line sensor is an image sensor for taking image of the papers, and the point sensor is a magnetic sensor for detecting the amount of a magnetism of the papers (figure 4).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 1** is rejected under 35 U.S.C.102(b) as being anticipated by Ohya et al. (US 6,125,195).

**For claim 1**, Ohya et al. disclose a paper discriminator (figures 1, 3, 5) for discriminating papers being conveyed along a conveyance path (passageway 13 in figure 1 provides a conveyance path), the paper discriminator (a bill discriminator 10 in figure 1) comprising:

a line sensor (column 2, lines 33-35; sensors 21-26 in figure 3) arranged at a first position on the conveyance path (figure 1), the line sensor acquiring first data on the entire surface of paper (column 3 line 63 to column 4 line 23);

a point sensor (column 2, lines 33-35; a magnetic sensor 20 in figure 3) arranged at a second position on the conveyance path (figure 1), the point sensor acquiring second data on a part of the paper (column 3 line 63 to column 4 line 10);

a memory for storing the first data (column 4, lines 63-64) and the second data (column 5, lines 2-4) in correlation with a common coordinate plane;

a data processor (central processor unit in figure 3 corresponds to a data processor) for acquiring predetermined positional information of the first data on the coordinate plane and acquiring the position of the second data with respect to the position of the first data on the basis of the positional information;

a storage unit for storing first reference data (column 4, lines 65-66) of the entire surface of the paper corresponding to the first data and second reference data (column 5, lines 4-6) of the entire surface of the paper corresponding to the second data; and

a discriminator (figure 3) for comparing the first data with the first reference data (column 4 line 66 to column 5 line 2) and comparing the second data with a part corresponding to the position of the second data in the second reference data 9column 5, lines 6-9), and for discriminating the paper based on the results of the comparison (column 5, lines 9-15).

**Other prior art cited**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwai (US 6,681,036 b1) disclose a paper money identification method.

Ota et al. (US 5,437,357) disclose a bill identification apparatus.

Fujita et al. (US 5,836,435) disclose a bill handling apparatus.

Kofune et al. (US 5,483,069) disclose a validation apparatus for flat paper object.

Kawano (US 6,247,693 B1) discloses a bill feed out device.

Mukai (US 6,394,256 B2) disclose a paper discriminating apparatus.

Mukai (US 6,012,564) discloses a paper processing apparatus.

**Contact information**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kanji Patel** whose telephone number is (703) 305-4011. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 6:30 p.m. Friday off.

If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, **Mehta, Bhavesh**, can be reached on (703) 308-5246.

Any inquiry of general nature or relating to the status of this application should be directed to the **Group receptionist** whose telephone number is (703) 305-4700.

The **Fax number** for this group is (703) 872-9314.



Kanji Patel  
Patent Examiner  
Group Art Unit 2625  
May 14, 2004